MASTER OF SCIENCE IN

INFORMATION
TECHNOLOGY

資訊科技理學碩士學位課程

STAY AHEAD OF IT TRENDS
EMBRACE CHANGES WITH CONFIDENCE

About
US

About PolyU
With over 87 years of proud tradition and ranking among the world's top 100 institutions, PolyU strives in interdisciplinary research and impactful innovations to address real-world challenges.

About COMP
The Department of Computing (COMP) is one of the pioneers offering computing education in the territory. Since 1974, COMP has been devoted to nurturing professional talents to support the advancement of society.

International Recognition

Today, COMP has gained international recognition in world-class research and high-quality education and ranked among the top 100 in a number of world rankings. In the latest world university rankings by the subject "Computer Science":

25th U.S. News & World Report 2025

**40th** Global Ranking of Academic Subject 2024

74th The Times Higher Education World University Rankings 2025

Advanced learning facilities & laboratories

COMP owns world-class laboratories and the first University Research Facility in Big Data Analytics in Hong Kong, providing solid hardware support for cross-disciplinary research and teaching activities.

- FinTech and Cyber Security Lab (FCSL)
- Internet and Mobile Computing Lab (IMCL)
- Research Centre on Data Science and Artificial Intelligence (RC-DSAI)
- The Research Centre for Blockchain Technology (RCBT)
- University Research Facility in Big Data Analytics (UBDA)

Students undertaking projects and dissertations will have the opportunity to access other resources such as the Game Lab and the Big Data and Cloud Computing Platform.
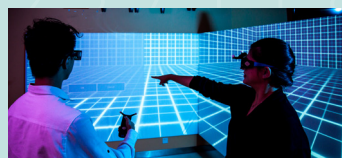
Excellent platform for peer learning & exchange

Our MSc programmes offer a well-resourced environment of broad student mix, students can benefit from interaction with their peers in exchanging ideas and sharing experiences. COMP also maintains an extensive network of MSc alumni, students can acquire both advanced expertise and professional networks that help them scale new heights in their careers.

MSc in **Information Technology**

Programme
Introduction

Our Master of Science in Information Technology (MScIT) programme is a science- and technology-based Programme tailored to nurture Mathematics, Information Systems, Engineering, or other Science graduates to become IT professionals and to enrich Computing/Computer Science graduates with advanced knowledge and skills in the important areas, especially natural language processing and visual computing.

Learning Outcomes:
• Acquire fundamental, advanced and specialised IT/computing knowledge, sound intellectual and practical skills, and critical thinking ability;

• Be able to think holistically and analytically, and apply IT/computing to solve problems, and to develop systems/applications both in a team or individually;

• Keep abreast of innovative, up-to-date and advanced technologies and will be able to engage in life-long independent learning.

University Research Facility in Big Data Analytics (UBDA)

Features

TWO STREAMS

The two streams are dedicated to cover the latest trends and "innovative technology in natural language processing and visual computing.

The most popular applications of **Natural Language Processing** include machine translation, question answering, information retrieval and extraction, text summarization, sentiment analysis and opinion mining, chatbots and dialogue systems, etc.

In the aspect of **Visual Computing**, the applications in demand include image and video analytics, visual data sensing, embedded visual data processing, deep learning for visual data analytics, visual data communication and networking, multi-modal visual data fusion, Internet of Video Things, smart city, and intelligent transportation, etc.

FLEXIBILITY

We offer both full-time and part-time mode with different study patterns including the combination of a dissertation, a project and subjects of equivalent credits for students to choose according to their schedule and preference. To cater to the development of the global IT industry and the demands of the market, stream(s) are also introduced in this programme. Based on their career goal, students enjoy the flexibility to study a MScIT degree with stream(s) or without stream if they fulfil the stream requirements.
- *Stream in Natural Language Processing*
- *Stream in Visual Computing*

WIDE VARIETY OF SUBJECTS THAT COVER HOT IT TOPICS

Given the rapid evolution of the IT industry, we offer a range of core and elective subjects that are in line with the fast-changing IT market needs and students' demand especially in the three booming areas: Artificial Intelligence, Big Data and FinTech. Students enjoy flexible options in selecting subjects that fit their interests and career goals. COMP frequently reviews the programme curriculum and we have introduced some new subjects in recent years such as "Machine Learning and Data Analysis", "Cyber and Internet Security", "Distributed Ledger Technology, Cryptocurrency and E-Payment", "Computer Vision and Image Analysis", etc.

Programme Structure

MSc in Information Technology

Students can select from a range of subjects offered under the programme. In general, each subject takes place once a week in the evening over a 13-week semester. Full-time students normally take 4 subjects in a semester, whereas part time students usually take 2 subjects in a semester.

Awards	MScIT with Stream in Natural Language Processing	MScIT with Stream in Visual Computing	MScIT
With Dissertation	3 P-Core + 4 S-Core + 1 AIE Subject + 1 Dissertation		3 P-core + 4 Electives* + 1 AIE Subject + 1 Dissertation
With Project	3 P-Core + 4 S-Core + 1 Elective* + 1 AIE Subject + 1 Project		3 P-core + 5 Electives* + 1 AIE Subject + 1 Project
Without Dissertation/ Project	3 P-Core + 4 S-Core + 3 Electives* + 1 AIE Subject		3 P-core + 7 Electives* + 1 AIE Subject
Credits requirements	31		31

*Students can take Master level elective subjects within the MScIT programme to satisfy their elective requirements, subject to the pre-requisite and exclusion requirements. Students may also take up to 2 non-Computing subjects from a selected pool. Students pursuing a general MScIT degree may take S-core subjects to fulfil part of their elective requirements.

#The streams will not form a part of the official award parchment. Upon completion of stream(s), students can apply for a separate certificate.

MODE OF STUDY

This is a mixed-mode programme that students may pursue their studies either in full-time or part time mode.

AWARD REQUIREMENT

Students are required to complete 31 credits for the MSc in IT.

Students can choose to study a MScIT degree with stream(s)# or without stream by taking the required subjects.

Subject Introduction

P-Core Subjects
- Data Structures and Database Systems
- Software Engineering and Development
- Internet Infrastructure and Protocols

S-Core Subjects - Stream in Natural Language Processing
- Artificial Intelligence Concepts
- Advanced Data Analytics
- Natural Language Processing
- Human Computer Interaction

S-Core Subjects - Stream in Visual Computing
- Artificial Intelligence Concepts
- Multimedia Computing, Systems and Applications / Multimedia Coding and Networking*
- Computer Vision and Image Processing
- Machine Learning and Data Analytics

Project-based Subjects
- Independent Study
- IT Startup: From Idea to Business Plan
- Project: 6 credits
- Dissertation: 9 credits

Academic Integrity and Ethics Subject
- EEE5T03 Engineering Ethics & Academic Integrity (1 credit)

Elective Subjects
- Financial Computing
- Cyber and Internet Security
- Distributed Ledger Technology, Cryptocurrency and E-Payment
- Big Data Computing
- Optimization and Applications
- Wireless Networking and Mobile Computing
- Software Project Management
- Extended Reality
- Internet Computing and Applications
- Computational Economics and Algorithms
- Theory and Practice of Video Game Design
- Advanced Techniques for High-Dimensional Data Management and Analytics

Supplementary Elective Subjects offered by other PolyU Departments
- Principles of Corporate Finance
- Graphs and Networks
- Investments
- Forecasting and Applied Time Series Analysis
- Applications of Computing and Technology in Accounting and Finance I
- Investment Science
- Business Analytics in Accounting and Finance
- IoT – Tools and Applications

While every stream has its own group of core subjects, a range of electives is offered depending on the availability of teaching resources and the number of registered students. Students are allowed to choose from a common pool of electives within the Department of Computing, subject to vacancies available.

Programme Core subjects: **P-core**

Stream Core subjects: **S-core**

Elective subjects: **E**

* Students can take either one subject to satisfy one S-core for the stream in visual computing

All subjects bear three credits unless otherwise stated and they are subject to review and changes.

Admission Requirements

- A Bachelor's degree in Computing/Computer Science, Mathematics, Information Systems, Engineering, or other Science disciplines. Applicants with a Bachelor's degree in other disciplines who have at least five years significant IT relevant work experience will also be considered.

- If you are not a native speaker of English, and your Bachelor's degree or equivalent qualification is awarded by institutions where the medium of instruction is not English, you are expected to fulfil the University's minimum English language requirement for admission purpose. Please refer to the "Admission Requirements" section for details.

- A Test of English as a Foreign Language (TOEFL) score of 80 for the Internet-based test or 550 for the paper-based test; OR

- An overall Band Score of at least 6 in the International English Language Testing System (IELTS).

More information can be found at www.polyu.edu.hk/study.

Application

To apply for the programme, applicants can submit their application via an online admission system at www.polyu.edu.hk/admission. This programme has a quota for admission therefore early application is strongly encouraged.

Programme Code	61030

Tuition Fee (30 credits)	HK$ 8,300 per credit for local and non-local students (subject to approval)

Department of Computing

PQ806
Mong Man Wai Building
The Hong Kong Polytechnic University
Hung Hom, Kowloon, Hong Kong
comp.pg@polyu.edu.hk

www.polyu.edu.hk/comp
facebook.com/polyucomp

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